

Critical Thinking in a World of Accelerating Change and Complexity

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We live closely intertwined with our fellow humans in a world in which we must learn to think critically about important social issues. As we move into the future, the issues before us will become more and more complex, making increased demands on our thinking skills.

The most important challenge facing educators is an intellectual one—developing the minds of our students to promote skilled reasoning and intellectual self-discipline. Acquiring critical thinking skills will enable students to make critical distinctions between the real and unreal, the true and the false, the deep and the superficial. It also enables students to take the high ground, to systematically foster fair-mindedness, and to develop ethical reasoning.

In this brief article, we will focus on two important critical thinking conceptual sets—the analysis and assessment of thought. Our objective is to identify ways in which teachers can develop thinking skills among their students in classroom interaction and through their responses to students' written work. We present the kinds of questions teachers can ask to advance student thinking skills. With enough practice, these questions will eventually come naturally to students, moving them further along the road to thinking clearly and reasonably about major issues.

Targeting the Analysis of Thought

Let us first consider the analysis of

thought. If we want students to take command of how they think through social issues and problems, they must be skilled in deconstructing their thought process. To take their thinking apart, they need to have command of the *elements of reasoning*. They need to understand, in other words, that whenever we think,

- we think for a *purpose*;
- within a *point of view*;
- based on *assumptions*;
- leading to *implications* and consequences.
- we use *concepts*, ideas and theories;
- to *interpret information* (data, facts, experiences and evidence)

Here are some questions teachers can ask, and that students need to learn to ask, which target the analysis of thought. Some of these sample questions are general in nature; others target the social disciplines:

1. *Questioning Goals and Purposes*. All

thought reflects an agenda or purpose. Assume you do not fully understand a person's thought until you understand its goals and purposes. Some of the many questions that focus on purpose in thinking include:

- What is your purpose right now?
- What was your purpose when you made that comment?
- Why are you writing this? Who is your audience? What do you want to persuade them of?
- What is the purpose of this assignment?
- What are we trying to accomplish here?
- What is our central aim or task in this line of thought?
- What is the purpose of this chapter, relationship, policy, law?
- What is our central agenda? What other goals do we need to consider?

2. *Questioning Questions*. All thought is responsive to or guided by a question. Assume you do not fully understand a thought until you understand the question that gave rise to it. Questions that

focus on questions in thinking include:

- I am not sure exactly what question you are raising. Could you explain it?
- Is this question the best one to focus on at this point, or is there a more pressing question we need to address?
- The question in my mind is this ... Do you agree or do you see another question at issue?
- Should we put the question (problem or issue) this way ... or that way?
- What is the most insightful way to frame the question, from your perspective?
- What questions might we be failing to ask that we should be asking?
- What are some essential questions at the heart of social studies (of history, civics, geography, etc.)?

3. Questioning Information, Data, and Experience. All thoughts presuppose an information base. Assume you do not fully understand a thought until you have identified the information (facts, data, experiences, evidence) that supports or informs it. Questions that focus on information in thinking include:

- On what information are you basing that comment?
- What experience convinced you of this? Could your experience be distorted?
- How do we know this information is accurate? How could we verify it?
- Have we failed to consider any information or data that we need to consider?
- What are these data based on? How were they developed? Is our conclusion based on hard

facts or soft data?

- How can this information be viewed differently, if seen from a historical, geological, sociological, anthropological perspective?

4. Questioning Inferences and Conclusions. All thought requires the making of inferences, the drawing of conclusions, the creation of meaning. Assume you do not fully understand a thought until you understand the inferences and interpretations that have shaped it. Questions that focus on inferences in thinking include:

- How did you reach that conclusion?
- Could you explain your reasoning?
- Is there an alternative plausible conclusion?
- Given all the facts, what is the best possible conclusion?
- Are we interpreting the information from a biased perspective, from a narrow ideology that may need to be questioned?
- Is our limited worldview causing us to interpret the information in a narrow, partial, exclusive perspective?

5. Questioning Concepts and Ideas. All thought involves the application of concepts. Assume you do not fully understand a thought until you understand the ideas that are guiding the thinking. Questions that focus on concepts in thinking include:

- What is the main idea you are using in your reasoning? Could you explain that idea?
- Are we using the appropriate concept, or do we need to reconceptualize the problem?
- Do we need more facts, or do

we need to rethink how we are labeling the facts?

- Is our question a legal, sociological, psychological, or ethical one?
- What are some essential ideas at the heart of the social disciplines? How do the essential ideas interrelate within the discipline and with important ideas in other disciplines?
- What is geography? What is history? What is sociology? What is anthropology? How do these concepts, or disciplines, interrelate?

6. Questioning Assumptions. All thought rests upon assumptions. Assume you do not fully understand a thought until you understand what it takes for granted. Questions that focus on assumptions in thinking include:

- What exactly are you taking for granted here?
- Why are you assuming that? Shouldn't we rather assume that...?
- What assumptions underlie our point of view? What alternative assumptions might we make?
- What is generally assumed about social rules and taboos within any particular social group? Are those assumptions always justifiable?
- What assumptions underlie this particular social rule or taboo? Are these assumptions justifiable?

7. Questioning Implications and Consequences. All thought is headed in a direction. It not only begins somewhere (resting on assumptions), it is also goes somewhere (has implications and consequences). Assume you do not fully understand a thought unless you know

the most important implications and consequences that follow from it. Questions that focus on implications in thinking include:

- What are you implying when you say...?
- If we do this, what is likely to happen as a result?
- Are you implying that...?
- Have you considered the implications of this social policy, both immediate and future?
- What are some important implications of studying social phenomena, or for studying geography, history, civics, etc?

8. Questioning Viewpoints and Perspectives. All thought takes place within a point of view or frame of reference. Assume you do not fully understand a thought until you understand the point of view or frame of reference that places it on an intellectual map. Questions that focus on point of view in thinking include:

- From what point of view are you looking at this?
- Is there another point of view we should consider?
- Which of these possible viewpoints makes the most sense given the situation?
- What is the point of view of this historian? How do the viewpoints of these historians differ? Which viewpoint is more justifiable given the evidence?
- If we think critically about social studies, what points of view will we foster in the culture? What will we expect of people living in social groups? What will we allow? What will we discourage?
- How can we foster viewpoints in society that are broad and fair-minded, rather than narrow and selfish?

Targeting the Quality of Reasoning

To be skilled at reasoning within the social disciplines, students need to understand and routinely apply, not only the elements of reasoning, but also universal intellectual standards. These are the standards by which thinking can be reasonably judged. Yet most students (and for that matter, most people) are unaware of them. These standards include, but are not limited to, clarity, precision, accuracy, relevance, depth, breadth, logic, and fairness.

Skilled thinkers explicitly use intellectual standards on a daily basis. They recognize when others are failing to use them. They recognize when they are failing to use them. They routinely ask questions specifically targeting them.

Here are some guidelines for assessing thinking, along with some important questions routinely asked by disciplined thinkers, questions that should be fostered in student thinking.

1. Questioning Clarity. Recognize that thinking is always more or less clear. To clarify thinking, you should routinely elaborate, illustrate, and exemplify it. Questions that focus on clarity in thinking are:

- Could you elaborate on what you are saying?
- Could you give me an example or illustration of your point?
- I hear you saying “_____.” Am I hearing you correctly, or have I misunderstood you?

2. Questioning Precision. Recognize that thinking is always more or less precise. Precision is focused on details. Questions that focus on precision in thinking are:

- Could you give me more details about that?
- Could you be more specific?
- Could you specify your allegations more fully?

3. Questioning Accuracy. Recognize that thinking is always more or less accurate. Critical thinkers routinely check to determine whether their thinking represents things as they really are. Questions that focus on accuracy in thinking are:

- How could we check that to see if it is true?
- How could we verify these alleged facts?
- Can we trust the accuracy of these data given the questionable source from which they come?

4. Questioning Relevance. Recognize that thinking is always capable of straying from the task, question, problem, or issue under consideration. To make sure your thinking is relevant, make sure that all considerations used in addressing it directly bear upon it. Questions that focus on relevance in thinking are:

- I don’t see how what you said bears on the question. Could you show me how it is relevant?
- Could you explain what you think the connection is between your question and the question we have focused on?

5. Questioning Depth. Recognize that thinking can either function at the surface of things or probe beneath that surface to deeper matters and issues. Critical thinkers are careful to determine the depth required for the task at hand (and compare that with the depth that actually has been achieved). To figure out whether a question is deep, determine whether it involves complexities that must be considered. Questions that focus on depth in thinking are:

- Is this question simple or complex? Is it easy or difficult to answer?
- What makes this a complex question?
- How are we dealing with the complexities inherent in the question?

6. *Questioning Breadth.* Recognize that thinking can be more or less broad-minded (or narrow-minded) and that breadth of thinking requires the reasoner to think insightfully within more than one point of view or frame of reference. To reason well through a question, you must determine how much breadth of thinking is required (and how much has in fact been exercised). Questions that focus on breadth in thinking are:

- What points of view are relevant to this issue?
- What relevant points of view have I ignored thus far?
- Are you failing to consider this issue from an opposing perspective because you are not open to changing your view?
- Have you entered the opposing views in good faith, or only enough to find flaws in them?
- You have looked at the question from a legal viewpoint. But what about an ethical perspective?

7. *Questioning Logic.* Recognize that thinking can be more or less logical, that it can be mutually supporting, can make sense together, or it can be contradictory or conflicting in some sense. Questions that focus on logic are:

- Does all this fit together logically?
- Does this really make sense?
- Does that follow from what you said?
- Does what you say follow from the evidence?

8. *Questioning Fairness.* Recognize that thinking can be more or less fair. Whenever more than one point of view is relevant to the situation or in the context, the thinker is obligated to consider those relevant viewpoints in good faith. To determine whether and to what extent more than one viewpoint is relevant, look to the question at issue.

Questions that focus on fairness are:

- Does one group have some vested interest in this issue that causes them to distort other relevant viewpoints?
- Are you sympathetically representing the viewpoints of others?
- Is the manner in which you are addressing the problem fair—or is your vested interest keeping you from considering the problem from alternative viewpoints?
- Are concepts being used justifiably (by this or that social group)? Or is some group using concepts unfairly to manipulate someone (and selfishly get what they want)?
- Are these laws justifiable and ethical, or do they violate someone's rights?

Conclusion

It is in the social studies classroom that students develop the knowledge and skills they need to understand the important issues of our time. By teaching them to ask the right questions and develop the thinking abilities needed to analyze these issues and engage in powerful reasoning about them, we can provide our students with lifelong skills that enable them to make a constructive and positive contribution to society. 🌐

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